

Amendments to the Specification

Please replace paragraph [0002] with the following amended paragraph:

[0002] Historically, wind turbines have been very small contributors to overall power generation to supply electrical grids. The low unit ratings (<100 kW) and the uncertain availability of wind sources ~~caused~~ causes wind turbine generators ~~affect negligible~~ to have a negligible effect when power grid operators ~~considered~~ consider the security of the grid. However, wind turbine generators with ratings of 1.5 MW or more are now available. Furthermore, many power generation developers are installing wind farms having one hundred or more wind turbine generators. The “block” of power available from wind farms with 1.5 MW wind turbine generators is comparable to a modern gas turbine generator. Accordingly, wind turbine generators are increasingly feasible sources of power for the power grid.

Please replace paragraph [0005] with the following amended paragraph:

[0005] In the past, wind turbine generators have been allowed to trip offline during a low voltage event. However, this does not satisfy LVRT requirements. Currently, wind turbine ~~generators~~ generators’ specifications can require connection and synchronization with the power grid down to levels of 70% of rated voltage. These requirements can be accommodated through, for example, increased capacity in various components (motors, generators, converters, etc.). However, more severe voltage fluctuations, for example, voltages at 30% of rated voltage cannot be accommodated using these techniques.

Please replace paragraph [0008] with the following amended paragraph:

[0008] Wind turbine systems are designed to maintain operation during a voltage fluctuation where the grid voltage drops below the rated voltage (e.g., 70%, 50%, 30% of rated voltage). This is referred to as “low-voltage ride through” or “LRVT.” Voltage fluctuations can also occur when the grid voltage exceeds rated voltage (e.g., 105%, 110%, 120% of rated voltage). Severe voltage fluctuation events when the fluctuation exceeds the system’s capacity to operate cause the systems to trip or to fault.

Please replace paragraph [0032] with the following amended paragraph:

[0032] Transformers 530 are coupled to the power lines over which wind turbine generators 510 provide power to substation 520. Transformers 530 provide a lower voltage signal corresponding to the voltage at substation 20. In one embodiment, transformers 530 ~~represents~~ represent a group of three transformers, one for each of three phases in a three-phase power system.

Please replace paragraph [0033] with the following amended paragraph:

[0033] Voltage monitor 540 is coupled to receive the output voltages from transformers 530. Voltage monitor 540 periodically samples the voltage level output from transformers 530 and generates a signal indicating the magnitude of the voltage. The signal generated by voltage monitor 540 can be an analog signal or a digital signal. In one embodiment, voltage monitor 540 has a sampling rate corresponding to a one-quarter cycle of the power frequency. Thus, in a 60 Hertz power system, the sampling rate is 240 Hertz and in a 50 Hertz power system, the sampling rate is 200 Hertz. Other sampling rates and different relationships between power frequency and sampling rate can be used. The quarter-cycle sampling rate provides sufficient granularity to analyze voltage disturbances; however other sampling rates may be selected to provide a greater or lesser level of detail.